

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Marc Donis et al.
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For: MULTIPLE PRIORITY BUFFERING IN A COMPUTER NETWORK

EXPRESS MAIL MAILING LABEL NO. EL844533022

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PRELIMINARY AMENDMENT

Prior to examination, please amend the above-identified application as follows:

IN THE SPECIFICATION:

Please insert the following paragraph after the title and before the first paragraph as shown.

This application is a continuation of U.S. Application Serial No. 09/074,059 filed May 7, 1998, and is incorporated by reference herein in its entirety.

Respectfully submitted,

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MULTIPLE PRIORITY BUFFERING IN A COMPUTER NETWORK

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Field of the Invention

The invention relates to communication networks and, more particularly, to buffering received and/or transmitted communication units in a communications network.

10 Discussion of the Related Art

Communication networks have proliferated to enable sharing of resources over a computer network and to enable communications between facilities. A tremendous variety of networks have developed. They may be formed using a variety of different inter-connection elements, such as unshielded twisted pair cables, shield twisted pair cables, shielded cable, fiber optic cable, even wireless inter-connect elements and others. The configuration of these inter-connection elements, and the interfaces for accessing the communication medium, may follow one or more of many topologies (such as star, ring or bus). A variety of different protocols for accessing networking medium have also evolved.

A communication network may include a variety of devices (or "switches") for directing traffic across the network. One form of communication network using switches is an Asynchronous Transfer Mode (ATM) network. These networks route "cells" of communication information across the network. (While the invention may be discussed in the context of ATM networks and cells, this is not intended as limiting.)

FIG. I is a block diagram of one embodiment of a network switch 10. In this particular example, the network switch has three input ports 14a-14c and three output ports 14d-14f. The switch is a unidirectional switch, i.e., data flows only in one direction -- from ports 14a-14c to ports 14d-14f. A communication unit (such as an ATM cell, data packet or the like) may be received on one of the ports (e.g., port 14a) and transmitted to any of the output ports (e.g., port 14e). The selection of which output port the communication unit should receive the communication unit may depend on the ultimate destination of the communication unit (and may also depend on the source of the communication unit, in some

networks).

Control units 16a-16c route communication units received on the input ports 14a-14c through a switch fabric 12 to the applicable output ports 14d-14f. For example, a communication unit may be received on port 14a. The control unit 16a may route the